USDA United States Department of Agriculture | Forest Service | Northeastern Area State and Private Forestry | 180 Canfield Street Morgantown, WV 26505-3101

File Code: 3400
Date: April 30, 2009

Randy Turner
Superintendent
USDI National Park Service
Morristown National Historic Park
30 Washington Place
Morristown, NJ 07960-4299

Dear Mr. Turner:

On February 11, 2009, Brad Onken and Karen Felton from our office visited Morristown National Historic Park to assess the status of the hemlock woolly adelgid (HWA), *Adelges tsugae* and the elongate hemlock scale (EHS), *Fiorinia externa* populations and the need for treatment in 2009.

HWA densities ranged from none to light throughout the park, and HWA winter mortality was observed to be greater than 90 percent on most trees. EHS densities ranged from light to heavy and are currently the greater concern regarding tree health. Healthy hemlock trees can often withstand moderate populations of EHS without much impact but as trees become stressed from other causes such as HWA or drought, the chronic stress caused by EHS often becomes more detrimental to tree health. Population densities of this scale insect will also increase dramatically as tree health continues to decline. Several hemlocks at Morristown are already showing signs of decline from these pests, such as stunted or no new growth, needle discoloration, and/or tip dieback. Impacts to hemlock resources at Morristown NHP are expected to continue unless appropriate management actions are implemented.

Horticultural oil spraying as conducted in the past is still a viable option, however, given the height of the trees it is unlikely that adequate coverage of the entire crown can be achieved such that all portions of the infested crown are thoroughly drenched. Proper timing of oil sprays is also important as the crawler stage of these insects is much more susceptible to the oil. For these reasons it is our recommendation that infested hemlocks be treated with dinotefuran (Safari® 20 SG) a systemic insecticide that is applied to the soil around the base of the tree or as a bark spray.

Dinotefuran is in a new class of insecticides called neonicotinoids, is considered by EPA to have a favorable environmental profile and has proven to be very effective against HWA and EHS. A USDA Forest Service funded contract to prepare a human health and ecological risk assessment on dinotefuran has recently been completed and can be viewed at http://www.nvo.com/sera_inc.

Dinotefuran has been shown to be effective within a few weeks after application and best applied when the insects are actively feeding. Spring application is the optimal time for treatment with dinotefuran for HWA and EHS suppression.

If you have any questions or would like to pursue such treatments our office will be happy to assist you. Please contact Brad Onken at 304-285-1546 or Karen Felton at 304-285-1556 for this assistance.

Sincerely,

ROBERT LUECKEL
Field Representative
Morgantown Field Office

Cc: Bob Mason, Morristown NHP
Wayne Millington, USDI NPS, IPM
Jon klischies, NJDA